

**WEST**

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**Search Results - Record(s) 1 through 1 of 1 returned.**

☐ 1. Document ID: EP 1044039 A1, WO 200007671 A1, AU 9915344 A      Relevance Rank: 99

L1: Entry 1 of 1

File: DWPI

Oct 18, 2000

DERWENT-ACC-NO: 2000-223972

DERWENT-WEEK: 200053

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TITLE: Composite chemical barrier fabric for protective clothing has multiple layer chemical barrier fabric that has been coated on its side(s) with a layer of a halogen-free thermoplastic olefin resin

INVENTOR: CARROLL, T R

PRIORITY-DATA: 1998WO-US25021 (November 23, 1998)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 1044039 A1	October 18, 2000	E	000	A62B017/00
WO 200007671 A1	February 17, 2000	E	029	A62B017/00
AU 9915344 A	February 28, 2000	N/A	000	A62B017/00

INT-CL (IPC): A62B 17/00; A62D 5/00; B32B 7/00; B32B 27/12

ABSTRACTED-PUB-NO: WO 200007671A

## BASIC-ABSTRACT:

NOVELTY - A composite chemical barrier fabric (20) comprises a multiple layer chemical barrier composition (22) coated on at least one side with a film of thermoplastic polyolefin that has a molecular distribution of 0.85-0.95. The coated chemical barrier composite achieves at least 25% improvement in both puncture resistance and in flex-crack resistance of the fabric.

USE - The fabric is used in the manufacture of protective clothing, seam sealing tape, gas-tight zippers, gloves, shoe covers, and hoods (claimed). The fabric is slit to a narrow width and used as an interfacing material in combination with polyvinyl chloride (PVC) and PVC/chlorinated polyethylene (CPE) alloy fabrics to create gas tight unions between PVC visors and PVC zippers (claimed).

ADVANTAGE - The fabrics are easily converted into complex designs, e.g., fully encapsulating gas-tight suits. Both the puncture resistance and the flex crack resistance of the fabric are enhanced by at least 25% through the combination of a multi-layered chemical barrier film and the added layer of thermoplastic olefin resin.

DESCRIPTION OF DRAWING(S) - A figure shows an enlarged cross-sectional view of the invention.

Composite chemical barrier fabric 20

Multiple layer chemical barrier composition 22

Thermoplastic olefin resins 24,26

Full	Title	CIT.1	REV.1	CLS.1	REF.1	DRAW.1
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Terms	Documents
chemical same barrier same fabric and multiple layers	1

Display

50

Documents, starting with Document:

1

Display Format: REV

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**WEST**

Generate Collection

**Search Results - Record(s) 1 through 24 of 24 returned.**

- ☒ 1. Document ID: US 6183861 B1      Relevance Rank: 99

L2: Entry 1 of 24      File: USPT      Feb 6, 2001

US-PAT-NO: 6183861

DOCUMENT-IDENTIFIER: US 6183861 B1

TITLE: Conformable composite chemical barrier closure and attachment tape

DATE-ISSUED: February 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carroll; Todd R.	Gunterville	AL	35976	N/A

US-CL-CURRENT: 428/354; 428/343, 428/352, 428/356, 442/151

ABSTRACT:

A conformable, hand-tearable, high chemical barrier closure and attachment tape made up of a film composite which contains at least one stratum layer of polyvinylidene chloride, ethylene vinyl acetate, ethylene vinyl alcohol ethylene metallized polyester or similar chemical resistance material which may be disposed between additional layers of polyethylene, the film composite coated with an appropriate pressure sensitive adhesive which is further adhered to a woven base cloth which is further coated with additional pressure sensitive adhesive. Tapes having the structure show improved chemical resistance to the 15 liquid chemicals included on the ASTM F1001 chemical test battery as compared to a competitive tapes commonly used in the protective clothing and chemical packaging industry.

13 Claims, 4 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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- ☐ 2. Document ID: US 5901706 A      Relevance Rank: 97

L2: Entry 7 of 24

File: USPT

May 11, 1999

US-PAT-NO: 5901706

DOCUMENT-IDENTIFIER: US 5901706 A

TITLE: Absorbent surgical drape

DATE-ISSUED: May 11, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Griesbach; Henry L.	Atlanta	GA	N/A		N/A
Mathis; Michael P.	Marietta	GA	N/A		N/A
Bowen, Jr.; Uyles Woodrow	Canton	GA	N/A		N/A

US-CL-CURRENT: 128/849; 128/852

## ABSTRACT:

The present invention is directed to novel absorbent surgical drapes containing at least one hydrophilic meltspun fabric layer and a liquid impervious film layer. The meltspun fabric layer may include at least one spunbonded fabric, meltblown fabric or other nonwoven fabric that is made hydrophilic. The filaments or microfibers of the spunbonded or meltblown fabrics may contain a hydrophilic additive in or on the filaments or microfibers. In one embodiment, the film of the surgical drape is breathable. In another embodiment, the film of the surgical drape has anti-slip properties, due to the inherent properties of the film or to a pattern coating of latex or hot melt adhesive on an exposed surface of the film.

24 Claims, 2 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMCC	Draw Desc	Image
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☒ 3. Document ID: US 5733643 A      Relevance Rank: 94

L2: Entry 9 of 24

File: USPT

Mar 31, 1998

US-PAT-NO: 5733643

DOCUMENT-IDENTIFIER: US 5733643 A

TITLE: Physical barrier composite material

DATE-ISSUED: March 31, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Green; Philip W.	Miami	FL	N/A	N/A

US-CL-CURRENT: 428/217; 442/239

## ABSTRACT:

A composite barrier material is disclosed. The barrier material includes a first layer including a polymer resin in an amount of at least 40% by weight of the first layer and defining a first matrix, and a second layer integrally bonded to the first layer and including a polymer resin in an amount of at least 40% by weight of the second layer and defining a second matrix. The polymer resin of the first matrix has a different chemical structure than the polymer resin of the second matrix and the second layer has a cured hardness greater than the first layer. The shear bond strength of the barrier material is at least equal to the shear bond strength of a similar single matrix laminate comprising first and second layers of the same matrix material.

17 Claims, 3 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMC	Draw Desc	Image
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☐ 4. Document ID: US 5126182 A      Relevance Rank: 93

L2: Entry 20 of 24

File: USPT

Jun 30, 1992

US-PAT-NO: 5126182

DOCUMENT-IDENTIFIER: US 5126182 A

TITLE: Drapable, water vapor permeable, wind and water resistant composite fabric and method of manufacturing same

DATE-ISSUED: June 30, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lumb; Douglas	Methuen	MA	N/A	N/A
Naor; Yechiel	Brookline	MA	N/A	N/A
Rock; Moshe	Andover	MA	N/A	N/A

US-CL-CURRENT: 428/90, 156/277, 156/279, 156/327, 156/331.7, 427/206, 427/236, 428/306.6, 428/308.4, 428/315.9, 428/317.5, 428/317.7, 428/337, 428/339, 428/97

## ABSTRACT:

A drapable, water vapor permeable, wind and water resistant composite fabric including a fabric substrate, a layer of a foamed water vapor porous adhesive in the surface area of one side of the fabric substrate and a layer or fabric material suitable for exposed use on the other is provided. The fabric material is preferably a layer of flocked fibers. The cellular structure of the foamed adhesive permits water vapor to pass through, however, wind and liquid water is inhibited from passing through the foam barrier. The foamed adhesive is inhibited from penetrating deeply into the fabric substrate during manufacture by an adhesive barrier material on the fabric which may be substantially removed during later processing. The resultant fabric is drapable and particularly suited for use in apparel, replacing two or more single purpose fabric layers within one multipurpose fabric layer.

69 Claims, 1 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 5. Document ID: US 6100208 A Relevance Rank: 93

L2: Entry 2 of 24

File: USPT

Aug 8, 2000

US-PAT-NO: 6100208

DOCUMENT-IDENTIFIER: US 6100208 A

TITLE: Outdoor fabric

DATE-ISSUED: August 8, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brown; Trina Buce	Woodstock	GA	N/A	N/A
Hudson; Robert Leslie	Los Vegas	NV	N/A	N/A
DeLucia; Mary Lucille	Roswell	GA	N/A	N/A

US-CL-CURRENT: 442/364; 428/373, 442/345, 442/361, 442/362,  
442/363, 442/389, 442/394, 442/395, 442/396, 442/398, 442/399,  
442/76

## ABSTRACT:

An outdoor protective fabric is disclosed having (i) a UV stable outer nonwoven web of multicomponent sheath/core fibers having a polyethylene polymer sheath component and a polypropylene polymer core component; (ii) a breathable barrier layer such as a meltblown web or microporous film; and (iii) an interior nonwoven web of multicomponent fibers comprising a polyethyene polymer component and a nylon component.

24 Claims, 7 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☒ 6. Document ID: US 5409761 A      Relevance Rank: 91

L2: Entry 13 of 24

File: USPT

Apr 25, 1995

US-PAT-NO: 5409761

DOCUMENT-IDENTIFIER: US 5409761 A

TITLE: Breathable non-woven composite barrier fabric and  
fabrication process

DATE-ISSUED: April 25, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Langley; John D.	Guntersville	AL	N/A	N/A

US-CL-CURRENT: 428/198; 128/849, 156/73.1, 2/901, 422/34,  
428/315.5, 428/315.7, 428/315.9, 428/340, 442/382, 442/398

## ABSTRACT:

A breathable non-woven composite fabric having barrier capabilities to biological liquids comprised of at least one non-woven layer bonded to at least one surface of a thermoplastic microporous film, the non-woven composite fabric providing a barrier to passage of biological liquid when the composite fabric is subjected to contact with synthetic blood under the dictates of testing procedure ASTM ES 21 92 while maintaining a moisture of vapor transmission rate of greater than about 450 grams per square meter for 24 hours at about 75.degree. F. and about 65% relative humidity, the non-woven composite fabric having a breaking strength of at least about 14 pounds. A process is provided for forming the non-woven composite fabric which has been thermally bonded by unwinding and contacting at least one continuous thermoplastic non-woven web to at least one side of a continuous thermoplastic microporous film, continuously transporting said contacted webs and film through a thermal bonding zone and thermally bonding the webs and film at multiple spaced-apart locations, said bonding having a dwell time sufficient to thermally bond said composite while avoiding bum-through degradation of the film and webs.

37 Claims, 2 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMIC	Draw Desc	Image
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☐ 7. Document ID: US 5560974 A      Relevance Rank: 91

L2: Entry 11 of 24

File: USPT

Oct 1, 1996



US-PAT-NO: 5560974

DOCUMENT-IDENTIFIER: US 5560974 A

TITLE: Breathable non-woven composite barrier fabric and  
fabrication process

DATE-ISSUED: October 1, 1996

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Langley; John D.	Guntersville	AL	N/A	N/A

US-CL-CURRENT: 428/198; 128/849, 156/291, 156/73.1, 2/901,  
422/34, 428/315.5, 428/315.7, 428/315.9, 428/340, 442/398,  
442/401

## ABSTRACT:

A breathable non-woven composite fabric having barrier capabilities to biological liquids comprised of at least one non-woven layer bonded to at least one surface of a thermoplastic microporous film, the non-woven composite fabric providing a barrier to passage of biological liquid when the composite fabric is subjected to contact with synthetic blood under the dictates of testing procedure ASTM ES21-92 and ES22-92 while maintaining a moisture of vapor transmission rate of greater than about 450 grams per square meter for 24 hours at about 75.degree. F. and about 65% relative humidity, the non-woven composite fabric having a breaking strength of at least about 14 pounds. A process is provided for forming the non-woven composite fabric which has been adhesively bonded by unwinding and contacting at least one continuous thermoplastic non-woven web to at least one side of a continuous thermoplastic microporous film with spot adhesive or pattern adhesive applications between the film and webs, continuously transporting said contacted webs and film through a bonding and curing zone and bonding the webs and film at multiple spaced-apart locations, said bonding zone having a dwell time sufficient to cure the adhesive bond of the composite while avoiding degradation of the film and webs.

48 Claims, 3 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KINC	Draw Desc	Image
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☐ 8. Document ID: US 3635504 A      Relevance Rank: 91

L2: Entry 24 of 24

File: USPT

Jan 18, 1972

US-PAT-NO: 3635504

DOCUMENT-IDENTIFIER: US 3635504 A

TITLE: HOSE SPLICE

DATE-ISSUED: January 18, 1972

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Borden; Clarence W.	Trenton	NJ	N/A	N/A
Mills; John R.	Pennington	NJ	N/A	N/A

US-CL-CURRENT: 285/260; 156/158, 156/159, 156/258, 156/294,  
156/296, 156/303.1, 156/304.2, 156/304.3, 156/304.6, 285/397 ,  
285/915

## ABSTRACT:

Two-hose sections are spliced together by cutting their ends diagonally; telescoping them over a fabric-reinforced uncured rubber sleeve; placing uncured rubber against the sleeve to fill a gap between the hose sections; bridging between the outer surfaces of the hose sections with a strip of uncured rubber; and, curing the uncured rubber elements while applying compressive forces thereto.

Preparatory cutting of the hose sections is guided by a template which also flattens the hose. The internal sleeve is formed on a mandrel which remains within the sleeve until it is ejected therefrom by fluid pressure at the completion of the splicing operation

7 Claims, 14 Drawing figures Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☒ 9. Document ID: US 5007112 A Relevance Rank: 91

L2: Entry 21 of 24

File: USPT

Apr 16, 1991

US-PAT-NO: 5007112

DOCUMENT-IDENTIFIER: US 5007112 A

TITLE: Protective coveralls with improved ventilation

DATE-ISSUED: April 16, 1991

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lewis, Jr.; Milton A.	Richmond	VA	N/A	N/A
Mason; Jeffrey S.	Covington	IN	N/A	N/A
Swinford; Carson B.	Danville	IL	N/A	N/A
Wiseman, Sr.; Timothy R.	Richmond	VA	N/A	N/A

US-CL-CURRENT: 2/457; 2/458, 2/51, 2/79, 2/81, 2/913, 2/DIG\_4

## ABSTRACT:

An improved one-piece protective coveralls of the type affording a barrier and thermal protection against hot and/or corrosive liquids. The coveralls include a generally continuous outer shell of woven aramid fabric covered by a liquid impervious layer and a corresponding inner multilayer thermally insulating liner inside of the outer shell. The inner liner is fabricated from at least one layer of low density nonwoven fabric fastened to a woven fabric. The improved coveralls include an elongate underarm opening under each arm of the liner extending downwardly from the position of the wearer's armpit into and along the underside of the sleeve and downwardly into and along the side of the torso portion. An elongated leg inseam opening is provided on the underside of the torso portion of said liner fabric and which extends from position of the wearer's crotch downwardly into and along the inside of each leg. A stretchable, air permeable fabric is attached to said liner fabric and covers and defines the size and shape of said openings. The coveralls in accordance with the invention provide improved ventilation and greater freedom of movement is provided in said inner liner without substantially decreasing the protection provided by the coveralls.

8 Claims, 3 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 10. Document ID: US 5240767 A Relevance Rank: 91

L2: Entry 17 of 24

File: USPT

Aug 31, 1993

US-PAT-NO: 5240767

DOCUMENT-IDENTIFIER: US 5240767 A

TITLE: Nonwoven fabrics for printing

DATE-ISSUED: August 31, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Umezumi; Norio	Fukaya	N/A	N/A	JPX
Nishijima; Toshiyuki	Saitama	N/A	N/A	JPX
Kobayashi; Sampei	Funabashi	N/A	N/A	JPX
Tsukahara; Noboru	Fukaya	N/A	N/A	JPX
Fukui; Shinichi	Sayama	N/A	N/A	JPX

US-CL-CURRENT: 442/68; 430/138, 442/72, 524/195, 524/714

## ABSTRACT:

A nonwoven fabric, particularly composed by long-stock synthetic resin yarns such as polyethylene and polypropylene is provided at one or both surfaces thereof with an ink-setting layer formed by coating, drying and curing a resin composition containing some of acrylic resins, synthetic rubbers and polyester resins. The ink-setting layer is excellent in the transfer property and fixing ability to an oil ink which is ordinarily used for offset printing, and prevents the nonwoven fabric from being swelled or transformed by a petroleum high-boiling-point solvent contained in the oil ink. Preferably, a low-temperature cross-linking agent is incorporated with the resin composition of the ink-setting layer so as to complete cross-linking of the resin composition at a low temperature at which heat shrinkage or heat damage of the nonwoven fabric will not be caused, in a shortened period of time. Moreover, when 10 to 40% by weight of non-calcined clay, 1 to 15% by weight of titanium dioxide and 1 to 10% by weight of calcium carbonate or calcined clay are incorporated as fillers in the resin composition of the ink-setting layer, the ink-setting layer has improved absorbability, drying ability and fixing ability to a printing ink. A preferable construction of the nonwoven fabric has a first layer containing the low-temperature cross-linking agent and a second layer containing the specific filler ingredients.

2 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 11. Document ID: US 5706950 A Relevance Rank: 91

L2: Entry 10 of 24

File: USPT

Jan 13, 1998

US-PAT-NO: 5706950

DOCUMENT-IDENTIFIER: US 5706950 A

TITLE: Disposable diaper changing pack

DATE-ISSUED: January 13, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Houghton; Dawn Lynn Ilnicki	Appleton	WI	N/A		N/A
Feyen; Jean Sandra	Appleton	WI	N/A		N/A
Riddell; Wilfred Eugene	Neenah	WI	N/A		N/A
Winkel; Paula Cardinahl	Chilton	WI	N/A		N/A
Winter; Joseph Eric	Appleton	WI	N/A		N/A

US-CL-CURRENT: 206/581; 206/440, 604/385.01

## ABSTRACT:

A distinctive composite article has a longitudinal, length dimension and a lateral, width dimension. The article includes a flexible outer shell portion having a shell length and a shell width. At least a portion of a flexible drape layer is substantially affixed to the shell portion, and the drape layer has a drape width which is larger than the shell width. Additionally, the drape layer may have a drape length which is larger than the shell length. The drape layer includes a first laterally extending fold line, a first longitudinally extending fold line and at least a second longitudinally extending fold line. The longitudinally extending fold lines provide for a laterally-folded drape width which is not more than the shell width. The drape layer may also include at least a second laterally extending fold line, and the laterally extending fold lines may also provide for a longitudinally-folded drape length which is not more than the shell length. At least one removable, unit component is contained and enveloped within the drape portion when the drape portion is folded. A closure mechanism holds the shell portion in a closed-package condition which substantially envelops the drape portion when the drape portion is folded. An article opening means can selectively defeat the closure means to provide access to the unit component.

20 Claims, 28 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 20

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Dram. Desc.	Image
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☐ 12. Document ID: US 5208098 A Relevance Rank: 90

L2: Entry 19 of 24

File: USPT

May 4, 1993

US-PAT-NO: 5208098

DOCUMENT-IDENTIFIER: US 5208098 A

TITLE: Self-bonded nonwoven web and porous film composites

DATE-ISSUED: May 4, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stover; Walter H.	Marietta	GA	N/A	N/A

US-CL-CURRENT: 442/398; 428/171, 428/172

## ABSTRACT:

A self-bonded nonwoven web and porous film composite comprising at least one layer of a self-bonded, fibrous nonwoven web comprising substantially continuous filaments adhered to at least one layer of a polymeric porous film and having vapor-permeable and liquid-impermeable properties.

17 Claims, 2 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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☒ 13. Document ID: US 4608298 A      Relevance Rank: 90

L2: Entry 23 of 24

File: USPT

Aug 26, 1986

US-PAT-NO: 4608298

DOCUMENT-IDENTIFIER: US 4608298 A

TITLE: Weather proof insulating textile fabric composite

DATE-ISSUED: August 26, 1986

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Klauff; Harry J.	Owings Mills	MD	N/A	N/A

US-CL-CURRENT: 428/102; 428/316.6, 442/223, 442/225, 442/286

## ABSTRACT:

A weather resistant, vertically foldable, insulating, multi-layered textile composite is provided having a first outer layer composed of a knitted textile fabric with tightly interlaced synthetic textile yarns, which layer has water repellency properties. A second layer next to the first layer is composed of a tightly woven textile fabric having a flexible, polymeric essentially closed cell foam coating attached thereto. A third layer next to the second layer is composed of a non-woven batt of insulating textile fibers. A fourth layer next to the third layer is composed of an impervious synthetic polymeric film. A fifth layer next to the fourth layer is composed of a non-woven batt of chemical resistant textile fibers. A sixth inside layer next to the fifth layer is composed of a knitted textile fabric having tightly interlaced synthetic textile yarns, which layer has water repellency properties. The said layers are stitched together by rows of stitches of synthetic textile yarns, which rows of stitches are at least horizontally disposed such that the composite is vertically foldable. The composite has an insulating R value of at least 3 at a total composite thickness of at least less than 0.50 inch.

32 Claims, 1 Drawing figures Exemplary Claim Number: 21

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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☐ 14. Document ID: US 5237945 A Relevance Rank: 90

L2: Entry 18 of 24

File: USPT

Aug 24, 1993

US-PAT-NO: 5237945

DOCUMENT-IDENTIFIER: US 5237945 A

TITLE: Water barrier formed from a clay-fiber mat

DATE-ISSUED: August 24, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
White; Alec W.	Hoffman Estates	IL	N/A	N/A

US-CL-CURRENT: 112/420; 156/148, 156/279, 156/305, 156/308.2,  
210/502.1, 210/503, 210/507, 210/508, 210/679, 210/688,  
210/807, 210/901, 210/912, 264/109, 264/112, 264/123, 264/128,  
28/112, 405/107, 405/109, 405/115, 405/129.75, 405/270, 405/38,  
405/53, 428/102, 428/206, 442/35, 442/417, 52/169.1, 52/309.11,  
52/309.13, 52/309.14, 55/528, 55/DIG.9

## ABSTRACT:

A method of manufacturing a water barrier fabric, in flexible or rigid form, and article manufactured thereby, formed by dispersing a water-absorbent material, in powdered or granular form, among a mass of fibers during the formation of a loose mat of said fibers, to homogeneously disperse the powdered or granular water-absorbent material above, below and on each side of the fibers forming the mat, and thereafter densifying and structurally consolidating the mat, to secure the fibers in position surrounding and entrapping the water-absorbent material, such as by sewing, quilting, needle punching or otherwise bonding the fibers into a consolidated, structurally secure fabric at least partially filled with the powdered or granular water-absorbent material.

45 Claims, 14 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 15. Document ID: US 5298303 A      Relevance Rank: 90

L2: Entry 16 of 24

File: USPT

Mar 29, 1994



US-PAT-NO: 5298303

DOCUMENT-IDENTIFIER: US 5298303 A

TITLE: Fabric structure for severe use applications

DATE-ISSUED: March 29, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kerr; Richard C.	Rutherfordton	NC	N/A	N/A
Damewood; John R.	Spartanburg	SC	N/A	N/A
Menzel; Jill R.	Spartanburg	SC	N/A	N/A
Jarvis; Eddie L.	Charlotte	NC	N/A	N/A
Ross; Bert A.	Conyngham	PA	N/A	N/A

US-CL-CURRENT: 428/35.7; 206/524.2, 220/562, 220/905, 244/135B,  
427/359, 427/407.2, 427/412, 428/217, 428/219, 428/36.8 ,  
428/423.3, 428/67, 442/104, 442/126, 442/148, 442/71, 72/76

## ABSTRACT:

A coated fabric comprising a fabric substrate and a coating thereupon, said coating comprising a plurality of layers wherein at least one of the layers comprises a polyester polyurethane having a Shore A hardness of at least 90 durometer, or a linear polyurethane elastomer formed from a polyol; a diisocyanate compound; a first extender component having a molecular weight of below about 500; and a second extender component; wherein the diisocyanate compound is initially reacted with the first extender component in a molar ratio of above 2:1 to form a modified diisocyanate component having a functionality of about 2 prior to reaction with the other components to provide relatively low temperature processing properties to the composition. Preferably, different layers of these polyurethanes are included.

44 Claims, 5 Drawing figures Exemplary Claim Number: 1,21,26  
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☐ 16. Document ID: US 5389166 A Relevance Rank: 90

L2: Entry 14 of 24

File: USPT

Feb 14, 1995

US-PAT-NO: 5389166

DOCUMENT-IDENTIFIER: US 5389166 A

TITLE: Water barrier formed from a clay-fiber mat

DATE-ISSUED: February 14, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
White; Alec W.	Hoffman Estates	IL	N/A	N/A

US-CL-CURRENT: 156/71; 112/420, 112/440, 112/475.08,  
112/475.22, 156/92, 156/93, 210/502.1, 210/503, 210/507,  
210/508, 210/679, 210/688, 210/807, 210/901, 210/911, 405/107,  
405/109, 405/115, 405/129.75, 405/270, 405/53, 405/63, 428/102,  
428/163, 428/206, 428/211, 428/314.4, 442/13, 442/149, 442/35,  
442/60, 52/169.1, 52/309.13, 52/309.14, 55/522, 55/DIG.9

## ABSTRACT:

A method of manufacturing a water barrier fabric, in flexible or rigid form, and articles manufactured thereby, formed by dispersing a water-absorbent material, in powdered or granular form, among a mass of fibers during the formation of a loose mat of said fibers, to homogeneously disperse the powdered or granular water-absorbent material above, below and on each side of the fibers forming the mat, and thereafter densifying and structurally consolidating the mat, to secure the fibers in position surrounding and entrapping the water-absorbent material, such as by sewing, quilting, needle punching or otherwise bonding the fibers into a consolidated, structurally secure fabric at least partially filled with the powdered or granular water-absorbent material. In a preferred embodiment, one, or both, major surfaces of the fabric is coated with a water-insoluble adhesive to substantially increase the tensile strength of the fabric and to prevent shifting of fibers when installed on sloping surfaces.

41 Claims, 14 Drawing figures Exemplary Claim Number: 1,40  
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 17. Document ID: US 4670073 A Relevance Rank: 89

L2: Entry 22 of 24

File: USPT

Jun 2, 1987

US-PAT-NO: 4670073

DOCUMENT-IDENTIFIER: US 4670073 A

TITLE: Bonding man-made fabrics to form protective garments  
without use of stitching

DATE-ISSUED: June 2, 1987

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Langley; John D.	Guntersville	AL	N/A	N/A

US-CL-CURRENT: 156/73.1; 156/157, 156/216, 156/73.2, 156/73.4,  
2/275

## ABSTRACT:

A method for bonding seams in protective garments without use of any stitching, by applying high-frequency ultrasonic waves of pressure to overlapping edges of fabric of non-woven spunbonded olefin or polyolefin having laminated to one side thereof a polyethylene or polyvinylidene chloride film.

2 Claims, 3 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 18. Document ID: US 5795584 A      Relevance Rank: 89

L2: Entry 8 of 24

File: USPT

Aug 18, 1998

US-PAT-NO: 5795584

DOCUMENT-IDENTIFIER: US 5795584 A

TITLE: Post-surgical anti-adhesion device

DATE-ISSUED: August 18, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Totakura; Nagabhushanam	Norwalk	CT	N/A	N/A
Muth; Ross R.	Brookfield	CT	N/A	N/A
Gravener; Roy D.	Fairfield	CT	N/A	N/A
Hain; Matthew	New Haven	CT	N/A	N/A
Koyfman; Ilya S.	Orange	CT	N/A	N/A

US-CL-CURRENT: 424/426; 424/444, 424/486, 424/78.37, 602/46,  
602/904

## ABSTRACT:

Surgical adhesion barriers and methods of using such surgical adhesion barriers are provided. Surgical adhesion barriers according to the present invention have at least one layer of a bioabsorbable material comprising copolymers and/or block copolymers derived from trimethylene carbonate. Alternatively, a multilayer surgical structure having one or more bioabsorbable layers superimposed on a non-absorbable layer is useful for minimizing or preventing formation of fibrous adhesions between a healing trauma site and adjacent surrounding tissue. Alternatively, a bioabsorbable non-woven fabric in adherent contact with at least one bioabsorbable layer of foam, film, mesh, web or woven fabric is also provided. One or more medicinal agents may be interposed between or disposed within any of the aforementioned layers.

5 Claims, 1 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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☐ 19. Document ID: US 6068933 A Relevance Rank: 89

L2: Entry 3 of 24

File: USPT

May 30, 2000

US-PAT-NO: 6068933

DOCUMENT-IDENTIFIER: US 6068933 A

TITLE: Thermoformable multilayer polymeric film

DATE-ISSUED: May 30, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shepard; Mary E.	Neenah	WI	N/A	N/A
Blemberg; Robert J.	Appleton	WI	N/A	N/A
Middleton; Scott W.	Oshkosh	WI	N/A	N/A
Jesse; Jerry F.	Neenah	WI	N/A	N/A

US-CL-CURRENT: 428/474.4; 428/475.8, 428/476.3, 428/500,  
428/515, 428/516

## ABSTRACT:

A clear, multilayer polymeric film that is desirable for thermoforming applications. The film in its various embodiments include two inner layers

of nylon and/or a core layer of ethylene vinyl alcohol or ethylene vinyl alcohol copolymer sandwiched between the two inner nylon layers. The film can also contain two nylon layers which are bonded together via an adhesive layer and not contain a core layer of ethylene vinyl alcohol. The film also has an outer layer of a heat sealable polymer and may also have an outer layer of nylon. The film is coextruded, blown into a tubular shape, oriented, and cooled by the method of tubular water quenching. The film has various improved physical properties over the prior art, including properties of "memory", clarity, gloss and low haze.

7 Claims, 6 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 20. Document ID: US 5330715 A Relevance Rank: 88

L2: Entry 15 of 24

File: USPT

Jul 19, 1994

US-PAT-NO: 5330715

DOCUMENT-IDENTIFIER: US 5330715 A

TITLE: Multilayer test device having fusion bonding attachment layer

DATE-ISSUED: July 19, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Blake; Kenneth A.	Elkhart	IN	N/A	N/A
Christner; James E.	Elkhart	IN	N/A	N/A
Lucchese, II; Leonard J.	Elkhart	IN	N/A	N/A

US-CL-CURRENT: 422/56; 422/55, 422/947, 435/805, 435/970,  
436/169, 436/170

## ABSTRACT:

A unitized multilayer dry reagent analytical chemistry test structure and device and method of fabricating such device is described. The device includes two or more contiguous layers of absorbent or porous paper or polymeric material, at least one of which is incorporated with a test reagent composition, the layers attached to each other with intermediate porous attachment layers by fusion bonding. When the device is contacted with the fluid being tested the attachment layers allow the free flow of such fluid from one layer to the next.

15 Claims, 4 Drawing figures Exemplary Claim Number: 6  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 21. Document ID: US 5520132 A Relevance Rank: 88

L2: Entry 12 of 24

File: USPT

May 28, 1996

US-PAT-NO: 5520132

DOCUMENT-IDENTIFIER: US 5520132 A

TITLE: Containment integrity system for vessels

DATE-ISSUED: May 28, 1996

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Crippen; W. Stuart	Winchendon	ME	01475	N/A

US-CL-CURRENT: 114/74R; 114/72

## ABSTRACT:

The present invention provides a containment integrity system for application in a vessel carrying bulk materials such as liquid petroleum products. The containment integrity system comprises a flexible liner having an inner composite fabric portion and an outer fiber-reinforced rubber skin portion, a fastening system for rigidly securing the flexible liner to the walls of the vessel, an anchoring system for releasably securing and conforming the flexible liner to and about all coverable features of the hull of the vessel, and a self-sealing flange assembly for insertion into all flow holes connecting the cargo compartments of the vessel. The present containment integrity system insures the necessary containment integrity of the hull of the vessel without significant reduction in the carrying capacity of the vessel.

20 Claims, 13 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 22. Document ID: US 5928745 A Relevance Rank: 88

L2: Entry 6 of 24

File: USPT

Jul 27, 1999

US-PAT-NO: 5928745

DOCUMENT-IDENTIFIER: US 5928745 A

TITLE: Thermoplastic fuel tank having reduced fuel vapor emissions

DATE-ISSUED: July 27, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wood; Willard E.	Arden Hills	MN	N/A	N/A
Beaverson; Neil J.	Hugo	MN	N/A	N/A

US-CL-CURRENT: 428/36.6; 428/35.4, 428/36.7, 428/518, 428/520,  
428/522

## ABSTRACT:

The invention can comprise a thermoplastic fuel tank or container having a vapor barrier comprising a cyclodextrin composition. A modified cyclodextrin that is chemically modified with substituents that increase the compatibility of the cyclodextrin material in the fuel container material can be used. The improved fuel container obtains substantial barrier properties from the interaction between the cyclodextrin material in the fuel container materials with the fuel vapor permeant materials. The cyclodextrin in the fuel tank walls complexes or entraps fuel vapor that permeates through the materials making up the tank and are held within the tank material preventing the permeant fuel vapor from passing through the tank into the environment. The fuel vapor permeant can comprise a variety of well known materials including aliphatic and aromatic hydrocarbons, oxygenates such as tertiary butyl methyl ether, ethanol, methanol, and other combustible liquid fuel materials.

27 Claims, 4 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 23. Document ID: US 5942321 A Relevance Rank: 88

L2: Entry 5 of 24

File: USPT

Aug 24, 1999



US-PAT-NO: 5942321

DOCUMENT-IDENTIFIER: US 5942321 A

TITLE: Headliner

DATE-ISSUED: August 24, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Romesberg; Floyd E.	Saint Louisville	OH	N/A		N/A
Asbury; J. Daniel	Celina	OH	N/A		N/A
Young; William J.	Bloomfield Hills	MI	N/A		N/A

US-CL-CURRENT: 428/300.7; 156/221, 156/250, 156/269, 156/276,  
264/257, 264/321, 264/45.1, 428/306.6, 428/317.1, 428/318.4,  
442/224, 442/373

## ABSTRACT:

A headliner is a laminate of multiple layers. The layers include polyurethane foam, agricultural fibers, a decorative material, and a backing. The agricultural fiber is jute, sisal, or kenaf or mixtures thereof. The method of making the headliner laminate includes making the sheet of agricultural fibers incorporating a binder, saturating a foam layer with an adhesive, putting one sheet of agricultural fibers on each side of the foam layer, applying the decorative material and backing to one side each, and squeezing the layers together to distribute the adhesive to all the layers and laminate them.

20 Claims, 3 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw. Desc	Image
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☐ 24. Document ID: US 6023856 A Relevance Rank: 88

L2: Entry 4 of 24

File: USPT

Feb 15, 2000

US-PAT-NO: 6023856

DOCUMENT-IDENTIFIER: US 6023856 A

TITLE: Disposable shoe cover

DATE-ISSUED: February 15, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brunson; Kevin K.	Argyle	TX	76226	N/A
Pinney; Marc E.	Grapevine	TX	76051	N/A
McCarty; Barbara A.	Halton City	TX	76117	N/A
Raspberry; Frank D.	Bedford	TX	76021	N/A
Fields; Sheldon T.	Fort Worth	TX	76137-1295	N/A

US-CL-CURRENT: 36/7.1R; 36/9R

## ABSTRACT:

A disposable shoe cover is provided for use with a wide range of foot sizes and different types of shoes and/or boots. A disposable shoe cover can be fabricated from a wide variety of different materials to enhance the performance of the resulting shoe cover. A disposable shoe cover is formed from three separate panels of material seamed together or from a single continuous web of material segmented into three panels by elastomeric bands. In one embodiment, the shoe cover may also include an angled seam section along the back heel portion to prevent bunching of the sole portion at or under the sole of the shoe.

24 Claims, 19 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 9

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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chemical same barrier same fabric and multiple layers	24

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1. Document ID: US 5626947 A      Relevance Rank: 52

L6: Entry 2 of 4      File: USPT      May 6, 1997

US-PAT-NO: 5626947

DOCUMENT-IDENTIFIER: US 5626947 A

TITLE: Composite chemical barrier fabric for protective garments

DATE-ISSUED: May 6, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hauer; Ernst J.	Steinheim	N/A	N/A	LUX
Rudys; Stasys K.	Luxembourg	N/A	N/A	LUX
Zeigler; James P.	Richmond	VA	N/A	N/A

US-CL-CURRENT: 428/195; 428/102, 428/104

## ABSTRACT:

Composite chemical barrier films and fabrics that are particularly useful in protective garments. The composite barrier material may be made by laminating a barrier film to a flexible substrate using a thermoplastic resin and topcoating the barrier film with a similar or dissimilar thermoplastic resin to allow fabric seaming when the fabric is fabricated into a protective garment. Protective garments made from the materials are lightweight while maintaining an adequate balance of strength and chemical protection.

10 Claims, 3 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw Desc	Image
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2. Document ID: US 5948708 A      Relevance Rank: 48

L6: Entry 1 of 4

File: USPT

Sep 7, 1999

US-PAT-NO: 5948708

DOCUMENT-IDENTIFIER: US 5948708 A

TITLE: Vapor protection suit and fabric having flash fire resistance

DATE-ISSUED: September 7, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Langley; John D.	Guntersville	AL	35976	N/A

US-CL-CURRENT: 442/131; 442/132, 442/133, 442/135, 442/136,  
442/228, 442/230, 442/231, 442/236

## ABSTRACT:

A multi-layer composite consisting of a chemical barrier layer of, a flame resistant layer, and a reflective layer. The chemical barrier layer is itself a composite material having multiple substrates selected to minimize permeability.

9 Claims, 3 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KAMC	Draw Desc	Image
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☐ 3. Document ID: US 4855178 A      Relevance Rank: 47

L6: Entry 4 of 4

File: USPT

Aug 8, 1989

US-PAT-NO: 4855178

DOCUMENT-IDENTIFIER: US 4855178 A

TITLE: Composite chemical barrier fabric

DATE-ISSUED: August 8, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Langley; John D.	Guntersville	AL	N/A	N/A

US-CL-CURRENT: 442/398; 2/455, 2/457, 428/317.3, 428/319.7,  
428/319.9, 428/475.8, 428/476.1, 428/518

## ABSTRACT:

A multilayer chemical barrier fabric is made up of a base sheet of nonwoven polypropylene laminated to a multilayer film sheet having a film of ethylene vinyl alcohol sandwiched between films of nylon with a surface film of linear low-density polyethylene. Fabrics having this structure show resistance to breakthrough within 8 hours for 13 of 15 chemicals listed on the ASTM F1001 chemical test battery and shorter breakthrough times for the other two.

4 Claims, 2 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMC	Draw Desc	Image
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☐ 4. Document ID: US 4865903 A      Relevance Rank: 47

L6: Entry 3 of 4

File: USPT

Sep 12, 1989

US-PAT-NO: 4865903

DOCUMENT-IDENTIFIER: US 4865903 A

TITLE: Chemically resistant composite structures and garments produced therefrom

DATE-ISSUED: September 12, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Adiletta; Joseph G.	Thompson	CT	N/A	N/A

US-CL-CURRENT: 428/215; 428/421, 428/422, 442/289

## ABSTRACT:

A flexible, impermeable, universally chemically resistant composite structure which may be fabricated into protective clothing useful, for example, in the handling and clean up of hazardous chemicals is provided for, which composite structure comprises a fabric substrate, and thermally-melt-bonded on both sides thereof, a coated film, which coated film comprises a PTFE film having a thermoplastic fluoropolymer coating on both sides thereof. Preferably, the fabric substrate of the composite structure has been treated with an antiwicking agent.

A method for forming such composite structures is provided for, which method comprises thermally-melt-bonding a PTFE film having a thermoplastic fluoropolymer coating on both sides thereof to each side of a fabric substrate.

Articles of protective clothing are also provided for which are fabricated from the subject composite structures.

23 Claims, 3 Drawing figures Exemplary Claim Number: 1,2  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMC	Draw Desc	Image
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USPT	polypropylene and fabric	25064	<a href="#">L3</a>
USPT	chemical same barrier same fabric and multiple layers	24	<a href="#">L2</a>
DWPI	chemical same barrier same fabric and multiple layers	1	<a href="#">L1</a>